UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,778	02/28/2005	Bruno Bozionek	2002P10504WOUS	8327

7590 12/16/2009

Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER	
SMITH, JOSHUA Y	
ART UNIT	PAPER NUMBER
2477	
MAIL DATE	DELIVERY MODE
12/16/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/525,778	BOZIONEK ET AL.	
	Examiner	Art Unit	
	JOSHUA SMITH	2477	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 August 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *33-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *33-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The amendment filed 08/26/2009 has been entered.

- **Claims 33-51 are pending.**
- **Claims 1-32 are cancelled.**
- **Claims 33-51 stand rejected.**

Claim Objections

1. **Claims 45, 47, 49 and 51** are objected to because of the following: Claim 45 states "A network access device for a third network **configured for** transmitting" (emphasis added by examiner), and Claims 45, 47, 49 and 51 each state that an apparatus or a component is "configured to" perform a step, where "configured for" and "configured to" are not positively recited (see MPEP 2106) and the language suggests or makes optional a step but does not require a step to be performed and does not limit a claim to a particular structure. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 45 and 46** are rejected under 35 U.S.C. 102(b) as being anticipated by Raffali-Schreinemachers (Patent Number: 5,740,374), hereafter referred to as Raffali.

4. **In regard to Claims 45 and 46**, Raffali teaches in column 2, line 49 to column 3, line 15, and in column 3, lines 4-62, and in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, regardless of a local protocol of a destination sub-network, at a source side a translation is carried out from a local source protocol into a reference protocol, where the source sub-network in this context does not need to know the protocol of the destination sub-network, at the destination side a translation is carried out from a reference protocol into a local protocol of the destination sub-network, and where local traffic is transferred under the control of a local protocol and transit traffic is transferred unchanged by means of tunneling, and the control information of traffic originating from another sub-network and intended for the local sub-network is translated into the format of the local protocol and transferred further while using the local protocol, and translation steps are only carried out at the source and destination sub-network, and the intermediate sub-networks transfer the messages, including their original control code, in a transparent manner and without manipulating the contents, and where a message of sub-network 2 (FIG. 4) (a first network) is transferred to sub-network 6 (FIG. 4) (a second network) with the message being tunnelled as transit traffic through the networks 3 . . . 5 (a third network) and the headers and trailers of the messages being translated at the source side and destination side, and the message, with its header H_R and trailer T_R are tunnelled through the sub-networks 3, 4 and 5 (FIG. 4) and first decapsulated, in a decapsulation member 32 (FIG. 4) (network access unit for a third network), at the interface between the sub-networks 5 and 6 (FIG. 4), and subsequently translated from the R format into the format of the protocol in sub-network 6 (FIG. 4) (a

network access unit converts a signal message into a second signaling protocol), where at the interface between the sub-networks 5 and 6 the message and its header H_R (FIG. 4) and trailer T_R (FIG. 4a) are unwrapped, after which said header H_R and trailer T_R are converted into a header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6 and which take care of the control of the message through sub-network 6 to terminal 7 (FIG. 4) (a network access device for a third network configured for transmitting a signaling message having a first signaling protocol received from a first device in a first network to a second device in a second network, a protocol conversion device configured to convert the signaling message received from the first device to a converted signaling message having a second signaling protocol that is different from the first signaling protocol if the second device does not support the first signaling protocol, the network access device configured to transmit the converted signaling message to the second device, the converted signaling message and the signaling message have identical signaling targets).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. **Claim 33-35, 37, 39-44 and 47-51** are rejected under 35 U.S.C. 103(a) as being unpatentable over Raffali-Schreinemachers (Patent Number: 5,740,374) in view of Bell (Patent No.: 6,229,818), hereafter respectively referred to as Raffali and Bell.

8. **In regard to Claims 33 and 34**, Raffali teaches in column 2, line 49 to column 3, line 15, and in column 3, lines 4-62, and in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, regardless of a local protocol of a destination sub-network, at a source side a translation is carried out from a local source protocol into a reference protocol, where the source sub-network in this context does not need to know the protocol of the destination sub-network, at the destination side a translation is carried out from a reference protocol into a local protocol of the destination sub-network, and where local traffic is transferred under the control of a local protocol and transit traffic is transferred unchanged by means of tunneling, and the control information of traffic originating from another sub-network and intended for the local sub-network is translated into the format of the local protocol and transferred further while using the local protocol, and translation steps are only carried out at the source and destination sub-network (the originating unit supporting a first signaling protocol and the destination unit supporting a

second signaling protocol), and the intermediate sub-networks transfer the messages, including their original control code, in a transparent manner and without manipulating the contents, and where a message of sub-network 2 (FIG. 4) (a first network) is transferred to sub-network 6 (FIG. 4) (a second network) with the message being tunnelled as transit traffic through the networks 3 . . . 5 (a third network) and the headers and trailers of the messages being translated at the source side and destination side, and the message, with its header H_R and trailer T_R are tunnelled through the sub-networks 3, 4 and 5 (FIG. 4) and first decapsulated, in a decapsulation member 32 (FIG. 4) (network access unit of a third network), at the interface between the sub-networks 5 and 6 (FIG. 4), and subsequently translated from the R format into the format of the protocol in sub-network 6 (FIG. 4) (a network access unit converts a signal message into a second signaling protocol), where at the interface between the sub-networks 5 and 6 the message and its header H_R (FIG. 4) and trailer T_R (FIG. 4a) are unwrapped, after which said header H_R and trailer T_R are converted into a header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6 and which take care of the control of the message through sub-network 6 to terminal 7 (FIG. 4) (forwarding a signaling message with a network access unit of a third network, the at least one signaling message being from an originating unit in a first network, the at least one signaling message being intended for a destination unit in a second network, the originating unit supporting a first signaling protocol and the destination unit supporting a second signaling protocol, the third network connecting the first network to the second network, transmitting a signaling message from the originating unit to the network

access unit by tunneling via the third network, the signaling message comprising destination datum identifying the destination unit, determining that the signaling message is intended for the destination unit via the network access unit assessing the destination datum, converting the signaling message into the second signaling protocol if the second signaling protocol is different from the first signaling protocol and transmitting the converted signaling message such that the converted signaling message is sent to the destination unit, a network access unit converts a signal message into a second signaling protocol, a destination datum is read by an access function).

9. Raffali fails to teach forwarding a signaling message without converting the signaling message to another signaling protocol if first and second signaling protocols are identical.

10. Bell teaches in column 4, lines 61-65, and in column 7, lines 24-56, and in FIGS. 2, 3 and 4, central office may be equipped with modems to interface a service provider 202 (FIG. 2) to a SOHO 200 (FIG. 2), such as xDSL modems to allow service providers to provide xDSL data transfers over the telephone connections, and a master node (FIGS. 2 and 3) receives one or more data packets, and the data packets are received 400 (FIG. 4) from an internet service provider (FIGS. 2 and 3) or a central office, and the one or more data packets are processed 402 (FIG. 4) by the digital signal processing (DSP) by running a demodulation algorithm for the xDSL load, and these processed data packets are stored 404 (FIG. 4) in a memory of the master node, the master node determines 406 (FIG. 4) whether the stored packet includes data targeted

for one or more of the nodes within a local network (FIGS. 2 and 3), and where the master node determines 406 (FIG. 4) that a stored packet is targeted for the local network, the master node determines 410 (FIG. 4) what the local identifier is in order to assist the master node in properly routing the data within the local network, and in some situations, the internet data transfer protocol may be different from the data transfer protocol used by the local network, and this is possible due to the isolation of the local network and the internet connections provided by the master node, and the master node determines 412 (FIG. 4) whether a protocol conversion is required, and if so, converts 414 (FIG. 4) from the internet protocol to the local protocol, and when no protocol conversion is required the data is transferred 416 (FIG. 4) to the local node which has been identified by the master node (a signaling message comprising destination datum identifying a destination unit, forwarding a signaling message without converting the signaling message to another signaling protocol if first and second signaling protocols are identical).

11. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bell with the teachings of Raffali since Bell provides a process where it is determined whether a protocol conversion must be performed when transferring packets between networks, which can be introduced into the teachings of Raffali since Raffali provides a detailed process of providing protocol translation between sub-networks, but does not clearly provide a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not

enacting a conversion process if the transferring of certain packets between networks is not needed.

12. **In regard to Claims 35, 37 and 44**, as presented in the rejection of Claim 33, Raffali in view of Bell teaches a network access unit.

13. Raffali fails to teach functions of a telecommunication system that serves for switching connections for transmission of voice data in a private data communication network, and a network access function for terminal devices of a local data communication network, and a signaling message relates to signaling for voice data transmission.

14. Bell teaches in column 4, line 66 to column 5, line 12, and in FIG. 2, a variety of CPE devices may be part of the SOHO environment 200 (FIG. 2), and the devices comprising the SOHO environment illustrated in FIG. 2 include the computing unit 208 and the facsimile equipment 210, and both voice and data may be transmitted from the service provider 202 (FIG. 2) to the SOHO 200, where it is routed via the local twisted-pair line supplied by the local loop 204 (FIG. 2), and signal splitters 212, 214 and 216 (FIG. 2) are used to distinguish voice signals from data signals, and to route the appropriate voice and data signals to the appropriate device within the SOHO 200, and voice signals may be input to the splitter 214 (FIG. 2), which filters the voice signals from any information directed to the computer 208 (FIG. 2), while allowing the voice signals to be transmitted to the telephone equipment 218 (FIG. 2) (functions of a telecommunication system that serves for switching connections for transmission of

voice data in a private data communication network, and a network access function for terminal devices of a local data communication network, and a signaling message relates to signaling for voice data transmission).

15. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bell with the teachings of Raffali since Bell provides a process where it is determined whether a protocol conversion must be performed when transferring packets between networks, which can be introduced into the teachings of Raffali since Raffali provides a detailed process of providing protocol translation between sub-networks, but does not clearly provide a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not enacting a conversion process if the transferring of certain packets between networks is not needed.

16. **In regard to Claims 39-43**, as presented in the rejection of Claim 33, Raffali in view of Bell teaches a network access unit.

17. Raffali fails to teach first and second signaling protocols are identical if they are both from a same protocol family, a destination datum is read by an access function, and determining a first signaling protocol of a signaling message and determining a second signaling protocol required by a destination unit that is related to the destination datum, and a network access unit determines a first signaling protocol of a signaling message and determines a second signaling protocol required by a destination unit that

is related to a destination datum, and a network access unit storing a signaling message in a storage unit.

18. Bell teaches in column 4, lines 61-65, and in column 7, lines 24-56, and in FIGS. 2, 3 and 4, central office may be equipped with modems to interface a service provider 202 (FIG. 2) to a SOHO 200 (FIG. 2), such as xDSL modems to allow service providers to provide xDSL data transfers over the telephone connections, and a master node (FIGS. 2 and 3) receives one or more data packets, and the data packets are received 400 (FIG. 4) from an internet service provider (FIGS. 2 and 3) or a central office, and the one or more data packets are processed 402 (FIG. 4) by the digital signal processing (DSP) by running a demodulation algorithm for the xDSL load, and these processed data packets are stored 404 (FIG. 4) in a memory of the master node (a network access unit storing a signaling message in a storage unit), the master node determines 406 (FIG. 4) whether the stored packet includes data targeted for one or more of the nodes within a local network (FIGS. 2 and 3) (a destination datum is read by an access function), and where the master node determines 406 (FIG. 4) that a stored packet is targeted for the local network, the master node determines 410 (FIG. 4) what the local identifier is in order to assist the master node in properly routing the data within the local network, and in some situations, the internet data transfer protocol may be different from the data transfer protocol used by the local network, and this is possible due to the isolation of the local network and the internet connections provided by the master node, and the master node determines 412 (FIG. 4) whether a protocol conversion is required, and if so, converts 414 (FIG. 4) from the internet protocol to the

local protocol, and when no protocol conversion is required the data is transferred 416 (FIG. 4) to the local node which has been identified by the master node (first and second signaling protocols are identical if they are both from a same protocol family, a destination datum is read by an access function, determining a first signaling protocol of a signaling message and determining a second signaling protocol required by a destination unit that is related to the destination datum, and a network access unit determines a first signaling protocol of a signaling message and determines a second signaling protocol required by a destination unit that is related to a destination datum, and a network access unit storing a signaling message in a storage unit).

19. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bell with the teachings of Raffali since Bell provides a process where it is determined whether a protocol conversion must be performed when transferring packets between networks, which can be introduced into the teachings of Raffali since Raffali provides a detailed process of providing protocol translation between sub-networks, but does not clearly provide a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not enacting a conversion process if the transferring of certain packets between networks is not needed.

20. **In regard to Claim 47**, as presented in the rejection of Claim 45, Raffali teaches a protocol conversion device.

21. Raffali fails to teach a decision device connected to a protocol conversion device, the decision device configured to determine whether a signaling message requires conversion into a converted signaling message.

22. Bell teaches in column 4, lines 61-65, and in column 7, lines 24-56, and in FIGS. 2, 3 and 4, central office may be equipped with modems to interface a service provider 202 (FIG. 2) to a SOHO 200 (FIG. 2), such as xDSL modems to allow service providers to provide xDSL data transfers over the telephone connections, and a master node (FIGS. 2 and 3) receives one or more data packets, and the data packets are received 400 (FIG. 4) from an internet service provider (FIGS. 2 and 3) or a central office, and the one or more data packets are processed 402 (FIG. 4) by the digital signal processing (DSP) by running a demodulation algorithm for the xDSL load, and these processed data packets are stored 404 (FIG. 4) in a memory of the master node, the master node determines 406 (FIG. 4) whether the stored packet includes data targeted for one or more of the nodes within a local network (FIGS. 2 and 3), and where the master node determines 406 (FIG. 4) that a stored packet is targeted for the local network, the master node determines 410 (FIG. 4) what the local identifier is in order to assist the master node in properly routing the data within the local network, and in some situations, the internet data transfer protocol may be different from the data transfer protocol used by the local network, and this is possible due to the isolation of the local network and the internet connections provided by the master node, and the master node determines 412 (FIG. 4) whether a protocol conversion is required, and if so, converts 414 (FIG. 4) from the internet protocol to the local protocol, and when no

protocol conversion is required the data is transferred 416 (FIG. 4) to the local node which has been identified by the master node (a decision device connected to a protocol conversion device, the decision device configured to determine whether a signaling message requires conversion into a converted signaling message).

23. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bell with the teachings of Raffali since Bell provides a process where it is determined whether a protocol conversion must be performed when transferring packets between networks, which can be introduced into the teachings of Raffali since Raffali provides a detailed process of providing protocol translation between sub-networks, but does not clearly provide a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not enacting a conversion process if the transferring of certain packets between networks is not needed.

24. **In regard to Claim 48**, as presented in the rejection of Claim 45, Raffali teaches a protocol conversion device.

25. Raffali fails to teach a telecommunication device functional unit connected to a protocol conversion device.

26. Bell teaches in column 5, lines 51-59, and in FIG. 3, a master node 304 (FIG. 3) includes interface circuitry which includes an xDSL modem that modulates and demodulates data between the SOHO environment 300 (FIG. 3) and a remote node

such as a service provider 306 (FIG. 3), and includes a local interface circuit 308 (FIG. 3) and a remote interface circuit 310 (FIG. 3), and the local interface circuit 308 includes a transceiver 312 (FIG. 3), a digital signal processing (DSP) unit 314 (FIG. 3), and a memory 316 (FIG. 3), and the remote interface circuit 310 (FIG. 3) includes a transceiver 318 (FIG. 3), a DSP unit 320 (FIG. 3), and a memory 322 (FIG. 3) (a telecommunication device functional unit connected to a protocol conversion device).

27. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bell with the teachings of Raffali since Bell provides a process where it is determined whether a protocol conversion must be performed when transferring packets between networks, which can be introduced into the teachings of Raffali since Raffali provides a detailed process of providing protocol translation between sub-networks, but does not clearly provide a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not enacting a conversion process if the transferring of certain packets between networks is not needed.

28. **In regard to Claim 49**, as presented in the rejection of Claim 45, Raffali teaches a protocol conversion device.

29. Raffali fails to teach a network access device is configured to communicate with a first device of a first network and a second device of a second network such that a

signaling message is forwarded to the second device without converting the signaling message if the first signaling protocol is supported by the second device.

30. Bell teaches in column 4, lines 61-65, and in column 7, lines 24-56, and in FIGS. 2, 3 and 4, central office may be equipped with modems to interface a service provider 202 (FIG. 2) to a SOHO 200 (FIG. 2), such as xDSL modems to allow service providers to provide xDSL data transfers over the telephone connections, and a master node (FIGS. 2 and 3) receives one or more data packets, and the data packets are received 400 (FIG. 4) from an internet service provider (FIGS. 2 and 3) or a central office, and the one or more data packets are processed 402 (FIG. 4) by the digital signal processing (DSP) by running a demodulation algorithm for the xDSL load, and these processed data packets are stored 404 (FIG. 4) in a memory of the master node, the master node determines 406 (FIG. 4) whether the stored packet includes data targeted for one or more of the nodes within a local network (FIGS. 2 and 3), and where the master node determines 406 (FIG. 4) that a stored packet is targeted for the local network, the master node determines 410 (FIG. 4) what the local identifier is in order to assist the master node in properly routing the data within the local network, and in some situations, the internet data transfer protocol may be different from the data transfer protocol used by the local network, and this is possible due to the isolation of the local network and the internet connections provided by the master node, and the master node determines 412 (FIG. 4) whether a protocol conversion is required, and if so, converts 414 (FIG. 4) from the internet protocol to the local protocol, and when no protocol conversion is required the data is transferred 416 (FIG. 4) to the local node

which has been identified by the master node (a network access device is configured to communicate with a first device of a first network and a second device of a second network such that a signaling message is forwarded to the second device without converting the signaling message if the first signaling protocol is supported by the second device).

31. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bell with the teachings of Raffali since Bell provides a process where it is determined whether a protocol conversion must be performed when transferring packets between networks, which can be introduced into the teachings of Raffali since Raffali provides a detailed process of providing protocol translation between sub-networks, but does not clearly provide a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not enacting a conversion process if the transferring of certain packets between networks is not needed.

32. **In regard to Claim 50**, Raffali teaches in column 4, line 48 to column 5, line 14, and in FIGS. 4 and 4a, a message (a signaling message), with its header H_R and trailer T_R are tunnelled through the sub-networks 3, 4 and 5 (FIG. 4) and first decapsulated, in a decapsulation member 32 (FIG. 4), at the interface between the sub-networks 5 and 6 (FIG. 4), and subsequently translated from the R format into the format of the protocol in sub-network 6 (FIG. 4), where at the interface between the sub-

networks 5 and 6 the message and its header H_R (FIG. 4) and trailer T_R (FIG. 4a) are unwrapped, after which said header H_R and trailer T_R are converted into a header H_6 and trailer T_6 which are compatible with the protocol in sub-network 6 and which take care of the control of the message through sub-network 6 to terminal 7 (FIG. 4) (a second device) (a signaling message is converted to a converted signaling message prior to being able to be transmitted to a second device).

33. **In regard to Claim 51**, as presented in the rejection of Claim 45, Raffali in view of Bell teaches a network access device.

34. Raffali fails to teach a network access device is also configured to store a signaling message on a storage device.

35. Bell teaches in column 4, lines 61-65, and in column 7, lines 24-56, and in FIGS. 2, 3 and 4, central office may be equipped with modems to interface a service provider 202 (FIG. 2) to a SOHO 200 (FIG. 2), such as xDSL modems to allow service providers to provide xDSL data transfers over the telephone connections, and a master node (FIGS. 2 and 3) receives one or more data packets, and the data packets are received 400 (FIG. 4) from an internet service provider (FIGS. 2 and 3) or a central office, and the one or more data packets are processed 402 (FIG. 4) by the digital signal processing (DSP) by running a demodulation algorithm for the xDSL load, and these processed data packets are stored 404 (FIG. 4) in a memory of the master node (a network access device is also configured to store a signaling message on a storage device), the master node determines 406 (FIG. 4) whether the stored packet includes

data targeted for one or more of the nodes within a local network (FIGS. 2 and 3), and where the master node determines 406 (FIG. 4) that a stored packet is targeted for the local network (a network access device is also configured to store a signaling message on a storage device).

36. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Bell with the teachings of Raffali since Bell provides a process where it is determined whether a protocol conversion must be performed when transferring packets between networks, which can be introduced into the teachings of Raffali since Raffali provides a detailed process of providing protocol translation between sub-networks, but does not clearly provide a decision-making process for transferring between sub-networks with the same protocol, and the decision-making process of Bell provides a clear decision-making process for not enacting a conversion process if the transferring of certain packets between networks is not needed.

37. **Claim 36** is rejected under 35 U.S.C. 103(a) as being unpatentable over Raffali in view of Bell, and further in view of Ould-Brahim et al. (Patent No.: US 7,274,704 B1), hereafter referred to as Ould-Brahim.

38. **In regard to Claim 36**, as presented in the rejection of Claim 33, Raffali in view of Bell teaches a network access unit and a terminal device of a data communication network.

39. Raffali fails to teach a network access unit provides network access functions for central units of at least two local data communication networks with the central units each providing services for a plurality of terminal devices of a data communication network.

40. Ould-Brahim teaches in column 3, lines 50-67, and in FIG. 1, a first CE device 24 (FIG. 1) is connected to a first VR 14 (FIG. 1) (a central unit) over an access link, where a CE device may be a router (providing services for a plurality of terminal devices), and a BVR 15 (FIG. 1) (a network access unit) is connected to a backbone 22 (FIG. 1), and where a BVR is connected to two VRs, each of which connect to a VPN of a site (see FIG. 1) (two local data communication networks) (a network access unit provides network access functions for central units of at least two local data communication networks with the central units each providing services for a plurality of terminal devices of a data communication network).

41. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Ould-Brahim with the teachings of Raffali in view of Bell since Ould-Brahim provides a network that implements virtual private networks, virtual routers, and a VPN dicovery process, which can be introduced into the teachings of Raffali in view of Bell to allow networks of diverse network protocols to establish and efficiently organize and maintain private networks and the secure communications they provide.

42. **Claim 38** is rejected under 35 U.S.C. 103(a) as being unpatentable over Raffali in view of Bell, and further in view of Nilsen (Patent No.: US 7,136,372 B1), hereafter referred to as Nilsen.

43. **In regard to Claim 38**, as presented in the rejection of Claim 33, Raffali in view of Bell teaches a first signaling protocol.

44. Raffali fails to teach a first protocol is a QSIG signaling protocol, or a QSIG based signaling protocol.

45. Nilsen teaches in column 4, lines 36-39, a QSIG access-node would translate call- and connection control messages into the H.323 format, but would tunnel the QSIG messages inside HTTP messages and address these to the service node (a first protocol is a QSIG signaling protocol, or a QSIG based signaling protocol).

46. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Nilsen with the teachings of Raffali in view of Bell since Nilsen provides a QSIG protocol, which can be introduced into the teachings of Raffali in view of Bell to allow signaling for efficiently providing services to customers.

Conclusion

47. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

48. **Tsukakoshi et al. (Patent Number: 5,086,426)**, teaches in column 6, lines 3-25, and in FIG. 5, FIG. 5 shows a flow chart illustrative of a frame relay operation from primary LAN 4 to secondary LAN 5. When a primary frame 20 is received by the buffer

memory 69B through the second transmitter/receiver unit 62 of the bridge in question (step 200), the identifier of the secondary LAN is extracted from the received frame (step 202) and the source secondary LAN identifier 11' contained in the received frame is compared with an identifier 11 of the associated secondary LAN stored in the memory 68 in accordance with the protocol processing routine 65 (step 204). If non-coincident, the protocol conversion table 67 is looked up to perform protocol conversion (step 206). Since frame formats corresponding to identifiers of the individual secondary LAN's are stored in the protocol conversion table 67, a format of received frame corresponding to the identifier 11' is converted into a frame format corresponding to the identifier 11 in accordance with the protocol processing routine 65. The received frame subject to protocol conversion is transferred to the routing processing routine 64 so that a destination address contained in the received frame is checked for its being registered in the routing table 66 (step 208).

49. **Boden et al. (Patent No.: US 6,993,037 B2)**, teaches in column 2, lines 48-60, an endpoint for an outer connection and an inner connection with respect to at least one second node is established at the first node, and responsive to receiving a nested packet from the second node on the outer connection, the first node decapsulates the packet into a raw packet and then performs source-in network address translation on the raw packet.

50. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA SMITH whose telephone number is 571-270-1826. The examiner can normally be reached on Monday-Friday, 10:30am-7pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag Shah can be reached on 571-272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joshua Smith
/J.S./
Patent Examiner
12-13-2009

/Gregory B Sefcheck/
Primary Examiner, Art Unit 2477
12-14-2009